

CLAIMS

What is claimed is:

1. A method for networking a plurality of clients in a personal video recording
5 (“PVR”) system, said method comprising the steps of:

receiving a plurality of television signals;

tuning each of said television signals in one of a plurality of tuners;

buffering said television signals on a storage medium in at least one PVR media
server;

10 coupling a plurality of clients, over a network, to said PVR media server;

receiving at least one request from each of at least two clients for at least one service
in said PVR system; and

allocating resources of said PVR system to said clients, as appropriate, to delivery
said service to said clients.

15 2. The method as set forth in claim 1, wherein:

the step of receiving at least one request comprises the step of receiving a request to
record a television program; and

the step of allocating resources of said PVR system to said clients comprises the steps
20 of:

assigning a tuner to record said television program;

allocating space on said storage medium to record said television program;

and

storing said television signal on said storage medium during a time scheduled
25 for said television program.

3. The method as set forth in claim 1, wherein:

the step of receiving at least one request comprises the step of receiving a request to watch buffered live television; and

the step of allocating resources of said PVR system comprises the steps of:

5 assigning a tuner to said client;

generating a buffer position to identify a location within said television signal for playback of said television signal at a client; and

transferring said television to said client, so as to deliver said television signal using said buffer position.

10 4. The method as set forth in claim 1, wherein:

the step of receiving at least one request comprises the step of receiving a request to receive television signals from a specific television service provider; and

the step of allocating resources of said PVR system comprises the steps of:

15 identifying one or more tuners coupled to receive television signals from said television service provider; and

assigning a tuner from said tuners to receive television signals from said television service provider.

20 5. The method as set forth in claim 1, wherein the step of allocating resources of said PVR system to said clients comprises the step of resolving any conflicts of assigning resources to said clients.

6. The method as set forth in claim 5, wherein:

25 the step of receiving at least one request comprises the step of receiving a request to watch buffered live television at a channel selected; and

the step of resolving any conflicts of assigning resources comprises the steps of:
determining whether one of said tuners is available to receive said television signal;
if so,

assigning said tuner to receive said television signal at said channel selected;

5 if not,

determining which tuners are potentially available;

querying clients assigned to said tuners potentially available to determine
whether said clients desire to change a current channel of said tuner to
said channel selected; and

10 assigning a tuner potentially available to receive a television signal at said
channel selected if no clients cancel a change of said current channel.

7. The method as set forth in claim 5, wherein:

the step of receiving at least one request comprises the step of receiving a request to
15 record a television program; and

the step of resolving any conflicts of assigning resources comprises the steps of:
determining whether one of said tuners is available to receive said television signal;
if so,

assigning said tuner to receive said television signal;

20 if not,

determining which tuners are potentially available;

querying clients assigned to said tuners potentially available to determine
whether said clients desire to cancel recordation of said television
program; and

25 assigning a tuner potentially available to receive said television signal if no
clients cancel recordation of said television program.

8. The method as set forth in claim 5, further comprising the steps of:
assigning a totally free tuner state to a tuner not assigned to a client;
assigning a maybe free tuner state to a tuner assigned to a client but not currently
5 executing a scheduled recordation; and
assigning a busy tuner state to a tuner currently executing a scheduled recordation.

9. A personal video recording ("PVR") media server comprising:
input for receiving a plurality of television signals;
10 a plurality of tuners for tuning each of said television signals;
storage medium for buffering said television signals;
network interface for coupling a plurality of clients, over a network, to said PVR
media server; and
said PVR media server for receiving at least one request from each of at least two
15 clients for at least one service in said PVR system, and for allocating resources
of said PVR system to said clients, as appropriate, to delivery said service to
said clients.

10. The PVR media server as set forth in claim 9, wherein:
20 said input further for receiving a request to record a television program; and
said PVR media server further for assigning a tuner to record said television program,
for allocating space on said storage medium to record said television program,
and for storing said television signal on said storage medium during a time
scheduled for said television program.

25 11. The PVR media server as set forth in claim 9, wherein:

said input further for receiving a request to watch buffered live television; and
said PVR media server further for assigning a tuner to watch said buffered live
television, for generating a buffer position to identify a location within said
television signal for playback of said television signal at a client, and for
transferring said television to said client, so as to deliver said television signal
using said buffer position.

12. The PVR media server as set forth in claim 9, wherein:

said input further for receiving at least one request comprises the step of receiving a
request to receive television signals from a specific television service
provider; and

said PVR media server further for identifying one or more tuners coupled to receive
television signals from said television service provider, and for assigning a
tuner from said tuners identified to said client.

13. The PVR media server as set forth in claim 9, said PVR media server further
for resolving any conflicts of assigning resources to said clients.

14. The PVR media server as set forth in claim 13, wherein:

said input further for receiving a request to watch buffered live television at a channel
selected; and

said PVR media server further for determining whether one of said tuners is available
to receive said television signal;

if so,

for assigning said tuner to receive said television signal at said channel
selected;

if not,

for determining which tuners are potentially available, for querying clients assigned to said tuners potentially available to determine whether said clients desire to change a current channel of said tuner to said channel selected, and for assigning a tuner potentially available to receive a television signal at said channel selected if no clients cancel a change of said current channel.

15. The PVR media server as set forth in claim 13, wherein:

said input further for receiving a request to record a television program; and said PVR media server further for determining whether one of said tuners is available to receive said television signal;

if so,

for assigning said tuner to receive said television signal;

if not,

for determining which tuners are potentially available, for querying clients assigned to said tuners potentially available to determine whether said clients desire to cancel recordation of said television program, and for assigning a tuner potentially available to receive said television signal if no clients cancel recordation of said television program.

16. The PVR media server as set forth in claim 13, said PVR media server further for assigning a totally free tuner state to a tuner not assigned to a client, for assigning a maybe free tuner state to a tuner assigned to a client but not currently executing a scheduled recordation, and for assigning a busy tuner state to a tuner currently executing a scheduled recordation.

17. A personal video recording ("PVR") system comprising:

at least one PVR media server comprising:

input for receiving a plurality of television signals;

a plurality of tuners for tuning each of said television signals;

storage medium for buffering said television signals;

network; and

a plurality of clients, coupled over said network to said PVR media server, for receiving at least one request from each of at least two clients for at least one service in said PVR system, and for allocating resources of said PVR system to said clients, as appropriate, to delivery said service to said clients.